

SYSTEM AND METHOD FOR POLLUTANT REDUCTION IN A BOILER

Abstract of the Disclosure

A system for reducing pollution components from a combustion process includes at least one burner modified in such a way so as to minimize production of at least one pollution component, an over fire air system which injects secondary air above the burner, a tempering system which injects a cooling fluid into a combustion zone of the burner so that the fluid is entrained to intersect an identifiable high pollutant component producing zone, a non-catalytic reduction system which injects a reagent into flue gases produced by the burner, and a targeted chemical injection system which injects a pollutant component reducing agent into a nearby turbulent combustion zone of the burner without a destruction of the agent by high temperatures, thus enabling the agent to be widely dispersed by the nearby turbulent zone before reaching a more distal zone where more favorable conditions for pollutant component reduction by the agent prevail.

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